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Article

On Architectural Space and Modes of Subjectivity: Producing the Material Conditions for Creative-Productive Activity

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Abstract
This article discusses extended implications of Lefebvre's *The Production of Space* in the context of contemporary global neoliberalism, by focus on its presence in architectural space as lived space and spatial practice. The main discussion concerns Lefebvre's concepts of abstract space, in relation to Felix Guattari's three ecologies, and the Aristotelean triad of aisthesis, poiesis and techné. The focus here concerns material architectural space and its relation to modes of subjectivity, especially creative-productive versus consuming subjectivities. The argument begins by elaborating on an understanding of abstract space as present in material architectural space as pervasive processes of disassociation of materiality and labor, and proceeds to through these concepts discuss modes of subjectivity—the dependence of abstract space on subjects as consumers—and the way this relates to challenges of sustainability. It further points to the importance of architectural space considered as built material environment for creative-productive modes of subjectivity which challenge abstract space and in extension consumer society, by offering potential dispositions that set subjects in a different relation to the world.

Keywords
abstract space; architectural space; Lefebvre; modes of subjectivity; three ecologies

Issue
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1. Introduction

Engaging with the works of Henri Lefebvre in light of the challenges facing us today constitutes a daunting but necessary task. Lefebvre's writing is dense and complex. Operating with deliberate contradictions, it never quite lets core concept stabilize—the line between specific cases and general statements is often implicit, even blurred (e.g., Goonewardena, 2005, p. 62; Stanek, 2014, p. lviii). Lefebvre's work has had a widespread influence on a wide range of scholarship over a long period—and often indirectly, as in the case of Harvey (1989) and Soja (1996, 2000)—and although many of the texts were translated to English twenty-five years ago, works such as *The Production of Space* (Lefebvre, 1974/1991) were written over forty years ago. During this period, it must be acknowledged, the world changed drastically. With the fall of the Berlin Wall and the dissolution of the Warsaw pact, the Cold War ended; in the subsequent period, the industrialized world went through several shifts in modes of production and economy. New economic powers appeared, the EU expanded, and the Welfare State was declared past its peak. Climate change became a tangible, looming threat, and many other things besides are now unrecognizable when compared to the world described by Lefebvre. Specific to this article, planning and architecture passed through a series of changes as well, both in terms of their disciplinary structure and modes of practice. All of these factors pose challenges in reading Lefebvre's work, which is deeply rooted in his own contemporary context, and is acutely critical of the processes and practices of his day. Whilst some of that critique risks becoming misdirected if taken at face value today, arguably the pervasive critique of power and its

spaces and manifestations is as valid now as it was at its conception.

However, rather than trying to map an overall engagement with Lefebvre's theories—others would be better posed to contribute with such an exposé (e.g., Goonewardena, Kipfer, Milgrom, & Schmid, 2008; Stanek, 2011)—I will focus on setting a number of select concepts drawn from his writings into relation to a series of challenges that we face in the present. I undertake this work as a researcher in architecture, which, it should be acknowledged, guides both my interpretation of Lefebvre's writings and where I focus my attention.

From this position, whilst a multitude of questions present themselves, I will try to make a rather specific contribution: my main focus will be on discussing the iterations that *abstract space* takes as *architectural space*, which arguably has seen less attention than other aspects of Lefebvre's work. Instead of focusing on the modes of production of material space or the disciplinary practices of architects—approaches seen, for instance, in Doucet (2015), Trogal (2017), Wolf and Mahaffey (2016), or Wungpatcharapon (2017)—I will focus on aspects of material space and how material space affects people directly or indirectly in their capacity as subjects, or more precisely, in the formation of their subjectivities. Tatjana Schneider (2017, p. 23) warns of the risks of romanticizing "social production" in addressing this theme—our understanding of the production of space, she cautions, "in particular with regards to architecture, needs to take into account not only how one produces but also how the resulting products—things, buildings or spaces—are then distributed and consumed". Acknowledging the importance of modes of production and of challenging of disciplinary boundaries and practices, this article aims to make a contribution to the broader body of scholarship on Lefebvre's work by focusing on the aspects of production and consumption that Schneider directs us toward. It also to some extent builds on Goonewardena's question:

> What is the role played by the aesthetics and politics of space—i.e., 'the urban sensorium', as I am elaborating here—in *producing* and *reproducing* the durable disjunction between the consciousness of our urban 'everyday life' (to use the term preferred by Lefebvre and Debord) and the now global structure of social relations that is itself ultimately responsible for producing the spaces of our lived experience? (Goonewardena, 2005, p. 55)

I address this question via a specific focus on the relation between material architectural space and modes of subjectivity, and am specifically concerned with interrogating relations between material architectural space and how those relations can be understood to condition, support, allow, foster, and restrict creative-productive modes of subjectivity.

2. Outlining the Argument

> Activity in space is restricted by that space; space "decides" what activity may occur, but even this "decision" has limits placed upon it. Space lays down the law because it implies a certain order—and hence also a certain disorder (just as what may be seen defines what is obscene)….Space commands bodies, prescribing, or postscribing gestures, routes, and distances to be covered. It is produced with this purpose in mind; this is its *raison d'être*. (Lefebvre, 1974/1991, p. 143)

My main line of argument will be anchored in this statement from Lefebvre, which points to how, while being critical to environmental determinism, he saw direct and concrete relations between the thoughts and actions of people and the material space in which they live, which includes *architectural* space. This relation must also be read not as a simple question of cause and effect but understood by recourse to a larger argument about setting different forms of social space in active relation to one another and to subjects. Actions do not *precede* material space, neither are they *determined by* it. As Schneider (2017, p. 26) argues, Lefebvre's point is that "[t]he social and the spatial are inextricably intermingled and cannot be separated", suggesting that it is important to continuously interrogate different trajectories between (if we simplify it) space, people, and society. This argument recalls Foucault's (1984/1986) warning that the effects of materiality and space cannot be ignored, even if they are not deterministic. Space is also produced with such relationality in mind, and this is also central to Lefebvre's argument—distances and proximities, absences and presences, and order and disorder are created, promoting certain forms of disposition while preventing others and setting the scene for what is part of society, and what is not.

In this article, I will engage with *abstract space* from a series of distinct directions. The discussion will be anchored in how abstract relates to architectural space—a notion Lefebvre separates from the "space of architects"[1]—and in what I believe the critical challenges of sustainability to be in the relation of individuals and society to space and materiality. I open the article with a discussion of the notion of abstract space as it is used in the subsequent argument, focusing on a few key processes and economic-political configurations upon which it has a bearing. I will also introduce some key findings of a research project conducted in Stockholm, from which many of the underlying notions explored in this article

[1] "It is worth appreciating that Lefebvre drew a distinction between 'architectural space' and the 'space of architects'….'Architectural space', by virtue of the experience that people have of it, is one of the means through which social space is produced" (Forty, 2000, p. 272). See also Lefebvre (1991, p. 300): "social space tended to become indistinguishable from the space of planners, politicians and administrators, and architectural space, with its social character, from the (mental) space of architects".

stem. I will then move on to engage Lefebvre's theories with Guattari's three ecologies and the formation of modes of subjectivity (Guattari, 2000). This discussion will be developed in part through relating Guattari's work to the Aristotelean concepts of aisthesis, poiesis, and techné. The main argument will revolve around the political thrust of Lefebvre's writings as they may be interpreted through his positions on the production of modes of subjectivity; in particular, I examine *one* aspect of abstract space, namely how it fosters modes of relations to self and the world in ways that are central to the continued expansion of neoliberal economy and consumer society, and that are thus highly detrimental to sustainability.

3. Abstract Space

> And in this sense, it remains an *abstraction*, even though, *qua* "thing", it is endowed with a terrible, almost deadly, power. The "commodity world" cannot exist for itself. For it to exist, there must be *labor*. (Lefebvre, 1974/1991, p. 342)

In *The Production of Space* (Lefebvre, 1974/1991), abstract space is a complex concept; it does not imply a sole focus on "abstractions of space", nor is it simply a question of immaterial space. In part, abstract space is a concept that directly engages with "architectural space". This abstraction is not aesthetic per se, but relational and social: what is abstracted is *labor*. Lefebvre's discussion here, like Baudrillard's (1970/1998), builds on the Marxist notion that we can no longer tell from a commodity what efforts were put into producing it (Stanek, 2008), although one can note differences in how the two scholars interpret this lack of traces. Both Lefebvre and Baudrillard situate this as an important part of consumer economy and industrialized societies. *Abstract space*, as I will discuss it here, relies on this absence of *labor*, and especially the absence of *productive labor*, although there are other forms of labor that are also displaced and hidden either in time or space.

Home labor and other forms of production that have tended to be performed by women tend to be absent in the arguments of both Lefebvre and Baudrillard (Brown, 2000; Steyaert, 2010), and for the argument I am currently making, this absence only emphasizes the more general displacement and making invisible of physical labor (and its performers), which takes place "elsewhere"—even if this elsewhere sometimes means "at home" (McLeod, 1996). However, for Lefebvre, abstract space *also* includes a gradual shift from *physical* to *mental* labor, whereby labor or work is gradually disassociated from material production in a range of different ways. These means of disassociation include the increasing subdivision of work and increased automatization, but also the emergence of working classes whose tasks are increasingly abstract even if active in production—a trajectory that, arguably, the architectural discipline has also largely followed.

I wish here to focus on three main aspects of abstract space in Lefebvre's writings: (1) the abstraction of the built environment, by the limitation of the *direct* involvement of citizens in the material production of their own local environments, and of consecutive change and traces of occupation; (2) the way in which physical space is abstracted from physical labor so that production, labor, and the traces of production are unreadable in the product (or space), including the displacement of sites of production to "elsewhere"; and (3) the continuous shift in forms of work from physical to mental labor.

It is worth keeping in mind that this article has been developed in a context that is actively engaged in the critique of modernist and functionalist architecture and planning, a critique that can further shed light on the architectural context in which Lefebvre was working. This context ranges from what was being built to how the discipline was working. For instance, in *The Silences of Mies*, Sven-Olov Wallenstein (2008) points out that through the international style, a certain "abstraction" (meant in the Lefebvrian sense) was intended: the new, modern, cosmopolitan subject would not maintain attachments to places in the same ways as before, and while architecture should cater to needs of personalization, it should also make sure that personalization acted in such a way so as not to leave lasting traces. Interchangeable consumer objects were to be inserted and removed, rather than any direct action taken in relation to space and architecture. This was to some extent also a democratic notion, intended to ensure that space was left open for re-appropriation. The abstraction of architectural labor from its results is perhaps most clearly illustrated in Mark Wigley's *White Walls, Designer Dresses* (1995). In this text, Wigley observes a contradiction between expressed simplicity and laborious construction—that is, between how the white wall without visible moldings, joints, or seams are one of the more labor-intensive ideals of architectural surfaces, as construction details and traces of work need to be hidden, surfaces need to be laboriously made smooth, and materials and components need to fit precisely together. Finally, both Schneider (2017) and Stanek (2011, p. 150) observe within architectural practice tendencies, present in society in general, toward an increasing use of abstracted modes of representation such as isometry rather than, for instance, perspectives, as well as an increasingly abstracted architectural discourse.

Within this framework, I will first and foremost concentrate on Lefebvre's work from the point of view of how material space, "whether it is large scale infrastructural projects such as airports, motorways or dams, or, indeed, small-scale buildings such as houses or pavilions, each project will privilege some activities and social relations and inhibit others" (Schneider, 2017, p. 24). I am particularly interested in scenes wherein such activities and relations concern active relations to material space in the sense of consecutive changes and traces, or the opportunities and presences of productive/production ac-

tivities in daily lived experience. Here, I believe it is important to note that Lefebvre, in several of his writings, perhaps most notably in *Toward an Architecture of Enjoyment* (Lefebvre, 2014), provides concrete examples of what he considers "positive" social space, and that some of these examples—such as his use of Roman baths—are not "socially produced" in the sense argued by scholars like Šušteršič (2017) or Wolf and Mahaffey (2016). Instead, their status as positive social spaces seems not to be associated with their mode of original production but rather their appropriation. While this can appear as a contradiction in Lefebvre's conceptualization, I see it as being in line with his theories, which, in all their complexity, do not propose an absolute causality between the mode of production of material space and its subsequent use in lived space and spatial practice. They do not, in other words, see a cause and effect relation between the process of a space's material production to the social space that is produced through experience and spatial practice, as it is appropriated. Therefore, while I would concede that socially produced space is more likely to lead to a social space, it seems worthwhile to focus on the other side of the (artificial) separation between space and people—as such, in this article I will delve deeper into an understanding of abstract space as concrete materiality, as such a discussion, I argue, is less developed than practices and discourse on modes of production.

3.1. Global Economies, Neoliberal Societies, and Industrial Transition

When addressing abstract space in this manner—that is, through a discussion of how material, architectural space participates in processes of abstraction—it is of course impossible to not first point to what could be called the displacement of productivity. Since the writing of *The Production of Space*, vast economic changes have taken place at a global scale, which have changed the relations between economies, industries, companies, state, geographies of production and consumption, and political and economic regulations and systems. Industry itself has gone through at least two major processes of change (Fromhold-Eisenbith & Fuchs, 2012), affecting both global and local scales. A more distinct shift into neoliberalism has taken place over large parts of the globe, where neoliberalism can be seen as a continuous process of deregulation, marketization, and increasingly narrow norms (Swyngedouw, Moulaert, & Rodriguez, 2002). "*Urban* neoliberalism", writes Roger Keil (2002, p. 235), "refers to the *contradictory re-regulation* of everyday life in the city". This contradictory re-regulation concerns, increasingly, restrictions on activities that do not conform to what is beneficial to the processes of the global market economy.

While the global economy was a factor already in the early twentieth century if not before—Simmel comments on the concurrent fully globalized economy—the globalization of economy and its impact on local societies has arguably continued to grow (e.g., Kaminer, Robles-Durán, & Sohn, 2011). Networks of production, distribution, and consumption have developed into increasingly complex, tangled global processes and structures including various subsidiaries, co-operations, dispersed ownership structures, global monetary flows. Additionally, an increased use of subsidiaries and temporary employments allow for further industrial flexibility, posing challenges of labor organizations (Meyer, 2012). Increasingly, "western" economies have posited themselves as knowledge economies, wherein base production has been moved to other locations on the globe, and suburbs and cities once based around industry have increasingly been challenged, shifting character and economic basis or declining as a result. Common strategies to handle these challenges have tended to focus on innovation, creative businesses, and high-tech niche businesses (Taylor, 2012). Industrial areas are razed to make space for other activities, today often "mixed-use" development—a mixed use conspicuously devoid of any substantial production facilities, which if kept at all are redeveloped into cultural spaces or spaces for the "creative economy" (e.g., Azcaráte, 2009; Florida, 2005; Montgomery, 2005; Sacco, Blessi, & Nuccio, 2009; cf. Weiner, 2004). Expectations of certain kinds of knowledge within a local workforce lead to an increasing divide between both the employed and unemployed, and between manual labor and knowledge economy (physical and mental) labor.

In part, this has to do with global market forces and managerial strategies of economic efficiency, designed to capitalize on symbiosis and proximity (Schiller, Penn, Druckman, Basson, & Royston, 2014), but it would be a mistake to subscribe too narrowly to such a pragmatic rationale. Part of what makes such strategies economically efficient, arguably, is that the "elsewhere" of production allows for working conditions and processes that would not be accepted "here". This includes working hours and salary levels, material conditions at workplaces (labor rights and the environments of workers), and many other socioeconomic aspects, but it also includes environmental aspects. Laws and regulations of material and energy use, waste management, emissions, and so on make a radical difference in terms of production costs—in one estimate, SCB (2016) suggests that if all that was consumed in Sweden was produced in Sweden, the country's carbon-dioxide footprint would be reduced to *half* its size. This reduction would not primarily be from reduced transports but from the effects of following Swedish environmental laws of production.[2]

The material standards of the "affluent world" therefore rely on lower standards and less regulation elsewhere. This difference is maintained by the aforementioned *abstraction* by *disassociation*. While this is fairly established in concurrent discourse, the challenge re-

[2] The estimation should be treated carefully, as it is fraught with danger in how to model and estimate differences, not to mention that it disregards questions of raw material access. It is primarily used illustratively.

mains the lack of a tangible, directly observable relation between product and labor. This simply can't be seen either *directly* (through seeing the specific work required to produce that which is consumed), or *indirectly* (through the presence of production in cities that contributes to building a more generic understanding of productive activity in general). The point, to put it shortly, is that inasmuch as production moves elsewhere for economics of efficiency, production is *displaced* in planning for the purpose of expanding vibrant, lively urban places for people to live in, in mixed-use areas with active ground floors—where productive activity has no place. It is thus not a simple matter of production *moving* elsewhere, but also a process of production *being moved* elsewhere, because it has no place in the visions and ideals of the compact vibrant city, which aims to form "future sustainable societies" (cf. Carmona & Wunderlich, 2012; Gehl, 2010).

3.2. Experiencing, Expressing, Creating

As another way into the discussion, I will make use of a project for the City of Stockholm that was concerned with sociospatial equality and culture (Koch, Legeby, & Abshirini, 2017; Legeby, Koch, & Abshirini, 2016;). This project amongst other things interrogated the way that the municipality conceptualizes and stores data, and how it acts, in relation to "culture" and "cultural activities". While the project operated with a fairly narrow and largely traditional notion of "culture", some of our findings are important for the current discussion. In summary, it was discovered that the concepts and data that characterized the municipality's approach to culture were: (1) organized by the municipality; and/or (2) sites or activities of experiencing culture. That is, the way the municipality worked with culture was centered on their own activities, and citizens as recipients or experiencers of cultural activities, objects, sites, or similar. In response, we created a conceptual model proposing that culture be understood from four different points of view. We named them, quite simply, "to experience", "to engage with", "to express", and "to do". The first two elements in the model were delineated using Walter Benjamin's (1936/2008) differentiation between distracted and engaged experience, whereas "to express" largely built on the discussions of Zukin (1995) on rights of representation in public space. The last aspect—"to do"—was found to be almost entirely absent in the municipal discourse, and, notably, quite little discussed in urban theory at large (see, e.g., Deutsche, 1996).

3.3. A Continuous and Pervasive Abstraction

Rather than a static condition, the above indicates the way in which abstract space operates as a pervasive process, where by "pervasive" I mean that it operates on many levels, at many scales, and in many places. While its specific actions and iterations are different, they all tend to follow the same direction, making *less present* manual labor and traces of production, while setting *more focus* on experience and sociability. Abstract space, to conclude with a highly topical example, can in this sense be likened to economies of recycling and waste management. David Graeber (2012) notes how, in the face of the concurrent challenges of handling waste and emissions, recycling has become a central topic; focus, however, has been placed not on recycling in general, but on household recycling in particular. At the point of writing, while household waste made up a maximum of ten percent of the total waste produced in the UK, it was the object of almost all recycling efforts. Recycling tends to mean leaving your sorted waste in a tube or at a recycling station whereupon it is taken elsewhere for disassembly and reuse—creating global economies of recycling labor, this arguably transforms the reuse side of the recycling equation into a form of abstract space. No relation exists between commodity and labor, either before or after use, and recycling means specifically that it should leave our hands to be taken care of "elsewhere" by "someone". It is not only unknown where this elsewhere and who this someone is, but the state of it being unknown is central to the operations as such. At the same time, this ignorance creates illusions of circular economies, while not addressing on the one hand the majority of waste produced in society, and on the other hand, which is a weakness in Graeber's article, the waste produced at the sites of production and distribution of the commodities which are then to be recycled. Again, disassociation through removing crucial steps in the process acts as a generator of abstraction, and in line with Lefebvre's argument, the main things that is disassociated is *labor*.

I acknowledge here that this "roll-out" of abstract space also produces differential space, spaces and practices of resistance and dissent, and that artists, scholars and architects actively engage in the creation and exploration of such space (e.g., Šušteršič, 2017; Wolf & Mahaffey, 2016; Wungpatcharapon, 2017). But while these projects and practices are important, the intent here is to persist in delving into material architectural space and its relation to the production of subjectivities—something to which these practices make major contributions, but which are not central to the current line of argument.

4. Lefebvre's Work and Modes of Subjectivity

> Social relations, which are concrete abstractions, have no real existence save in and through space. *Their underpinning is spatial*. In each particular case, the connection between this underpinning and the relations it supports calls for analysis. Such an analysis must imply and explain a genesis and constitute a critique of those institutions, substitutions, transpositions, metaphorizations, anaphorizations, and so forth, that have transformed the space under consideration. (Lefebvre, 1974/1991, p. 404)

Until now I have focused on Lefebvre's writing in relation to recent conditions and processes in society, and to set this in relation to how specific aspects of abstract space can be interpreted. The purpose, as stated in the outline, has been to reach a point where this can be discussed in relation to *modes of subjectivity*. I use "modes of subjectivity" here as distinct from concepts that more relate to entities such as "subjects", "persons", and "personality" (e.g., Butler, 1999; Laclau, 2000). Specifically, I'd like to address how the formation of subjectivities includes ways of relating to oneself, others, and the world, a set of relations that take on different, specific forms in different subjects. It is important to stress that the questions of subjectivity that I address here do not concern person-subjects per se, but ways in which person-subjects form relational, positional entities in the world, which change, adapt and grow over time, and wherein the same "person" may take on different modes in different situations. Rather than discussing "consumers" or "consuming subjects", I consider the ways and times in which entangled, complex, and adaptive subjects relate to the world as experiencing and consuming individuals, and the increasing dominance of this disposition. To further develop this, I will engage with Guattari's three ecologies and the Aristotelean triad of aisthesis, poiesis and techné.

4.1. Three Ecologies

> Rather than speak of the "subject", we should perhaps speak of *components of subjectification*, each working more or less on its own. This would lead us, necessarily, to re-examine the relation between concepts of the individual and subjectivity, and, above all, to make a clear distinction between the two. (Guattari, 2000, pp. 24–25)

Bringing Guattari's work into the discussion, it must be acknowledged, means bringing in the work of someone with whom Lefebvre was in conflict in the period in which *The Production of Space* was written. As Stanek (2014, pp. lvii-lxi) notes, Guattari was an active participant in *Centre d'études, de recherches, et de formation institutionnelles* (CERFI), and thus was someone with whom Lefebvre had a conflictual relationship. While reading the two thinkers in parallel today reveals many links in their respective lines of thought; here I undertake a cross-reading that intends to productively focus on differences rather than similarities between them.

Guattari's three ecologies can be outlined as comprising ecologies of relationality of *self-to-self*, *self-to-others*, and *self-to-environment*, or, mental, social and environmental ecologies tied to vectors of subjectification. This reading is prevalent and can be found in the interpretations made by Mohsen Mostafavi (2010) and Peg Rawes (2013). While simplification of this kind risks missing the nuances in Guattari's schema, here it serves as basis from which to re-approach Lefebvre's conceptualization of abstract space. The likeness between mental, social, and environmental ecologies and the simplified version of Lefebvre's triads into mental, social, and physical space is immediately striking. Understood as a construct of the disassociation of everyday life from material processing and labor, abstract space—and particularly its effects on subjectivity—maintains a productive relation to the three ecologies. Specifically, the three ecologies help us to understand how abstract space affects subjectivity through habits and practices. As Martina Löw (2016, p. 111) notes in relation to Lefebvre's work, "[e]verydayness means the lifestyle of individualization and particularization standardized by processes of socialization", and this everydayness must be acknowledged as central, as Douglas Spencer notes, in that "the individual is subject to forms of training that remain unreflected upon precisely because they appear as customary and habitual, as 'given'" (Spencer, 2016, p. 153).

On the level of *self-to-self* relations, abstract space participates in producing *subjects that relate to themselves* as experiencing, consuming subjects. These subjects do not "know" production and do not consider themselves as part of production—this is not to say that they are active "non-producers", but rather to claim that a disassociation exists between oneself and the economic, material, and social processes—as well as the material and immaterial transformations—that generate the commodities and conveniences which *I* make use of in my daily life. This dissociation also affects how the "everyday" and "lived space" impact on vectors of subjectivity and, following Lefebvre's line of discussion, how material space (by which I mean built space as well as commodities) influence the formation of contemporary subjects, who perhaps do not even relate to themselves as *productive*.

On the level of *self-to-others*, relations to others are embedded in subjectivity, both directly (through friends and family) and indirectly (through acquaintances or the Other). Abstract space here also contributes to specific formations of subjectivity. As Lefebvre states, "the space of the commodity may thus be defined as a homogeneity made up of specificities" (Lefebvre, 1974/1991, p. 341)—as a concrete abstraction, abstract space thus simultaneously *disassociates* the individual from a social context, and *embeds* the individual in an abstract whole through the specificities by which it forms its representational spaces and spatial practices. The individual becomes a consumer expected to be and become specifically an individual, but this individual will form an instance of overall neoliberal consumer culture—an argument that rings very similar to Baudrillard's (1970/1998). This position also needs to be set in critical relation to the pervasive discourse of creating "lively, vibrant environments", wherein others, rather than being active subjects to relate to and understand, are simply seen as actants whose main purpose is to participate in the generation of liveliness, which in turn is what is to be experienced. Others thereby become facilitators of experience rather than subjects to engage with, a practice that is a key component in this disassociation. As Claire Bishop (2004) notes

in her critique of relational art, palpable tendencies exist within contemporary architectural and planning practice that confuse the growth of meaningful social relations with "community as immanent togetherness" (Bishop, 2004, p. 67), and as a result facilitate the consumption of atmospheres of community-like gatherings rather than provide support for the formation of lasting social bonds.

The level of *self-to-environment* describes the way in which subjects (or subjectivities) relate to the world around them. Like the other ecologies, however, this is not *a* relation between *an* individual and *the* environment, but a set of relationships which form vectors that intersect to generate subjectivity. As such, "self-to-environment" by necessity forms a composite, wherein a multitude of vectors and attitudes contribute to generate a more general disposition that incorporates exceptions, contradictions, and variations. In part, the formation of these relations proceeds by way of the production of individual and social habits—a positive or problematic quality, depending on whether one reads Ballantyne (2011) or Spencer (2016); while habits may concern actions and practices, here I am interested in how such habits form trajectories, dispositions, and attitudes to the surrounding environment, perceiving it as given or malleable—as a site, in other words, for consumptive experience or active engagement.

In all three cases, architectural space participates in the generation of subjectivities by communicating norms, fostering of habits, and embedding culture and memories (e.g., Peponis, 2017). In this way, consumer society is not antithetical to specific practices of individual or particular production, but rather opposes subjectivities which relate to the world, in general, in a productive-creative capacity. Specific acts of ostensible production can even contribute to the abstract space of consumer society by means of establishing relations between actors and world which form parts of an overall consumer subjectivity.

As an example of how acts of alteration can be differentiated, we can turn to how the commodification of space itself plays an important role in the process of abstraction.[3] Addressing the subject as a real-estate investor and participant in the housing market, Hélène Frichot and Helen Runting (2018) write, "architecture not only frames the point of view of a subject tied up with real estate, architecture and its curated interiors mold the subject" (Frichot & Runting, 2018, p. 141). The link to Lefebvre's abstract space is perhaps even clearer in Runting's "The Liquid Seam" (2018), which highlights not only the abstracted character of commodified space, but its level of abstraction. Through symbolic representation and exchange, space the real estate commodity here is bound together to produce a continuous surface, an abstraction that only becomes possible through a series of operations in neoliberal society that are performed in order to detach—for instance—a home from the concept of inhabiting or "being at home". If for Lefebvre abstract space is the product of capitalist industrialism in that commodities, rather than being individual objects, takes on the role of forming the specific instances through which capitalism makes real the abstract space of the global neoliberal market economy, then space and real estate have taken on a similar character. This means that rather than forming markers of identity, the operations of personalization through which owners (rather than inhabitants) act on their homes in this market perform acts of spatial abstraction in that their primary engagement is with the continuous abstract surface of neoliberal real estate rather than with forming personal or collective bonds with the material environment in which the owner-inhabitants live their lives. This latter type of engagement should be clearly differentiated from what Catharina Gabrielsson (2018) discusses as "the critical potential of housework", whereby she describes how practices of maintenance, repair, and cleaning form "…an ethics of care that is fundamentally at odds with capitalist accumulation" (Gabrielsson, 2018, p. 251). Gabrielsson's argument is important and has many parallels to those of Steven Jackson (2014) in "Rethinking Repair", and Peg Rawes (2013) in "Architectural Ecologies of Care", wherein both scholars argue for a shift in how we consider the world in general to incorporate concepts of care, repair, and maintenance more directly, which, while important in and of itself, would also arguably push a shift in subjectivity as discussed here. To further develop these particular aspects of modes of subjectivity, I will turn my attention to the Aristotelian triad of aisthesis, poiesis, and techné.

4.2. Aisthesis, Poiesis, and Techné

> [I]n order to experience aesthetic enjoyment of any kind, the spectator must be aesthetically educated, and this education necessarily reflects the social and cultural milieus into which the spectator was born and in which he or she lives. In other words, the aesthetic attitude presupposes the subordination of art production to art consumption—and thus the subordination of art theory to sociology. (Groys, 2010, p. 11)

The argument Boris Groys (2010) makes is important in that it broadens the notion of "consumption" from being specifically concerned with transactions or material goods to incorporating the ways in which we relate to social or cultural specificities. Even in abstract categories such as "art", we see a focus on the experience and interpretation of art (and to some extent even the "effects" of art), which in turn implies a *consuming subject*, rather than a creative-productive subject.[4] We can read this as

[3] "Lefebvre also calls this capitalist space 'abstract space' characterized by the simultaneity of fragmentation (division of space into marketable parts) and homogenization (levelling function of the exchange value, which in capitalism dominates the utility value)" (Löw, 2016, pp. 111–112).

[4] Groys (2010, p. 16) notes further how "[i]n fact, there is a much longer tradition of understanding art as poiesis or techné than as aisthesis or in terms of hermeneutics. The shift from a poetic, technical understanding of art to aesthetic or hermeneutical analysis was relatively recent, and it is now time to reverse this change in perspective".

the utterance "I like this drawing" as opposed to "I like to draw", as opposed to "I can draw", as opposed to "I create drawings". While Groys confines his argument to art—or more precisely art theory—I believe that his observation holds wider implications. In a sense, while I agree with Tonkiss (2005) that one of Lefebvre's important contributions is his foregrounding of "lived space", or space as experienced in everyday practice, the focus on *lived space as experienced* risks becoming a focus on aisthesis—or consumption. It risks, in other words, posing people as consuming subjects, and in a planning or design context, it risks framing subjects as receivers and consumers of the product of planning and/or built development.

If abstract space constitutes a space of aisthesis, then this raises question of what kind of space constitutes a space of poiesis or techné. This is more than a passing query, it is a question that leaves one largely without answer in contemporary theory and practice (Koch et al., 2017). Writings definitely exist which address spaces of representation and perceived space with respect to aisthesis in Aristotle's triad (e.g., Zukin, 1995), but less scholarship has been undertaken on *spatial practice* considered as creative-productive engagement in and with the environment (see Deutsche, 1996; Petrescu, 2017). If we insist on widening the Aristotelean triad in two ways: from art to society, and from individual to collective, it becomes clear that abstract space operates to drive society towards spaces of aisthesis, which are fundamentally dependent on their disconnection from poiesis and techné. This disconnection relates to both the symbolic and to subjectivity. Translating poiesis to creative-productive activity and allowing this to include modes of production that are not "cultural" or "creative" in the generic sense (e.g., Wallenstein, 2008), it becomes even more obvious. Common stabs at localized production tend to emphasize this rift than to bridge it: urban farming by and large incorporates modes of production, products, and aspects thereof built upon an overall understanding of the purpose of (public) space as serving *experience*. Spatial practices thus tend to be limited to practices that conform to lived experiences operating through consumptive relationships to the world and society—that is, to modes of subjectivity that largely remains within the realm of (active or passive) aisthesis (see Benjamin, 1936/2008).

However, the Aristotelean triad provides a third piece, which is central: techné.

In order to on a more fundamental level make the disconnection between creative-productive subjectivity and consuming subjectivity, abstract space and the neoliberal market economy operate through the continuous eradication of techné—the type of knowledge that enable subjects to transition between consumption and production, experience and creativity—as well as the spaces where this can be trained and practiced. This eradication, as noted above, concerns both formal production (such as industries) and the concepts and conditions for spontaneous or informal creative-productive practices. It is also through this removal of knowledge and skills that abstract space and neoliberal economies operate on *modes of subjectivity*, as knowledge is central to a disposition of active, dynamic, and creative-productive relation to self, others, and environment. The knowledge that is techné is not specific, but rather lies in the learning of (any) skills that enables modes of subjectivity that relate to the environment as something that can be actively engaged with instead of experienced, lived in, or consumed. The eradication of techné is perpetrated on an individual and societal level, through configurations of production and consumption, and a continuous and pervasive roll-out of pleasant spaces of narrowly defined experience and consumption (Kärrholm, 2012; Zukin, 1995; cf. Carmona & Wunderlich, 2012; Gehl, 2010).

Recalling the four concepts developed in the Stockholm project mentioned above—to experience, to engage with, to express, and to do—one can note how, arguably, the first two belong to the category of aisthesis, whereas the latter two can be located in poiesis and techné. What becomes clear, however, is how much scholarly discourse—including Zukin's and others focusing on rights and politics of expression and representation—leave much work to be done with respect to the questions of how and where creative-productive activity is to take place, and where the knowledges and skills to engage in such can be tried, trained, honed, and practiced. There is no absolute or causal relation between spaces of expression and spaces of creation, nor is the abundance of expression a necessary sign of widespread creativity. Spaces of expression and spaces of creation also maintain a disjointed relationship to spaces of experience and engagement: there is nothing that says that a space rich in experience is a space where many can express themselves or where diverse and widespread creative-productive activity can be undertaken.

4.3. Vectors of Subjectification

The different modes of subjectivity discussed above can be seen to be the results of a number of distinct trajectories, which relate to many of the aspects in Lefebvre's triad as well as abstract space, as it appears in architectural space, or in concrete, physical reality and the conditions and restrictions this sets up. Rather than trying to directly tie material space to individual perception or specific subjects, however, we can now understand it in relation to Guattari's concept of components or vectors of subjectification:

> Vectors of subjectification do not necessarily pass through the individual, which in reality appears to be something like a 'terminal' for processes that involve human groups, socio-economic ensembles, data processing machines, etc. Therefore, interiority establishes itself at the crossroads of multiple components, each relatively autonomous in relation to the other, and, if need be, in open conflict. (Guattari, 2000, p. 23)

What architectural space offers are thus suggestions, directions, and trajectories, which together with other trajectories partake in the formation of subjectivities. The effect of any one or bundle of vectors is therefore always dependent on other vectors, past or present. Rather than the subject as "a consistent whole", these vectors suggest the importance of instead considering what I discuss as "modes of subjectivity", although in my work this specifically concerns the dispositions subjects find themselves in towards the environment and the socius. Such an understanding of subjectivity is of course not limited to architectural space but includes structures of labor, employment, and, not the least, time. Building on Guattari's concepts, Kate Soper (2013) illustrates how deeply rooted consumer society is in the rhythms of daily life, which is also addressed in relation to Lefebvre's concepts by, for instance, Koch and Sand (2010; see also Lefebvre, 2004). In her argument, the way contemporary economies work is to enforce consumer relationships through simultaneously perpetuating specific ideologies of value that must be realized through consumption since the capacity to "buy" the values becomes possible only through consistent overtime work. As a counterpoint, Soper (2013) argues for an "alternative hedonism", reconfiguring work-life relationships and enabling, through this reconfiguration, other relations to self, society, and the environment.

If we are to consider the conditions for a creative-productive relation to society and environment through spatial practice and lived space, it is clear that this must include a relation to space that sees it as a site for exploration and change that is linked to societal structures and the rhythms of economies, ecologies, and people. Such an understanding, I argue, it is in line with Lefebvre's argument that in order to challenge the status quo certain forms of representations of space and spaces of representation become necessary (see, e.g., Watson, 2007)—although this should not be confused with *established* or *specific* forms. Through conceiving of a different space, it is possible to conceive of a different society (Bradley, Gunnarsson-Östling, & Schalk, 2017; Wolf & Mahaffey, 2016), all while practices of social production offer other, more direct steps towards other practices and other ways of relating to space (Šušteršič, 2017). Conceived space is where there are openings for *other* realities, other practices, other societies. Projective research and the use of fiction in academia as in queer feminist studies have definitely shown the critical potential of *conceived space* (e.g., Burroughs, 2016), which arguably is already there in Lefebvre's definition. However, this comes with a caveat: power. In a neoliberal society, the capacity to implement conceived space is one of the most radically differentiated power levels, and this shifts the character of *conceived space*, doubly: firstly by differentiation between whose conceptions are made real, and secondly by differentiating between the *relation to material space* and to *modes of subjectivity in everyday life*, whereby the notion of space as something that one can alter has different degrees of presence in relation to different subjects.

This reiterates the importance of reading Lefebvre's work as deeply political and always integrated in a critique of power. In capitalist society, the way power *conceives* of space has a dramatically different effect on lived experience and spatial practices, as the ability to make such conceptions real differs so dramatically. Altering the ecologies of relations to self, others, and the environment therefore necessitates altering power relations, and concurrently challenging market economy. If we believe that consumption is an issue that needs to not only be transformed but be reduced, then altering modes of subjectivity and the way architectural space offers, suggests, communicates, allows, encourages (or whichever terms we chose to use), creative-productive relations become a central challenge of sustainability, changing the way we conceive of cities, and, to use a more everyday expression, how cities "look".

With this said, I will return to focusing on the main discussion in this article. I argue that abstract space operates on and with subjectivities in such a way so as to foster both expectations of and dispositions to the environment that are centered on experience, where even the most active relations to space continue to operate on an abstracted and consuming level—be it by what is traditionally understood as consumption; or by operations like the remaking of one's apartment as a consumer of products, aesthetics, labor, and space itself; or as citizens acting in public space. As noted above, there are many ways in which refurbishment (for the well-off) drifts from physical to mental labor, which includes the ways in which maintenance and other "housework" is performed, and by whom. It does so by having removed nearly all the traces of material production, by abstracting re-use through remote recycling, by offering a range of activities that are centered around consuming experiences or products, and by, more importantly, limiting and restricting the amount of space that fosters, enables, or simply allows productive activity on individual and social levels to happen.

In a time where, as Douglas Spencer (2016) expresses it, architecture has become an instrument of control and compliance, we must ask ourselves not only how we produce space, but what spaces we produce as a discipline, profession, or as active, participating citizens. The link between modes of the production of space and its subsequent mode of operation, or how it participates in the production of subjectivities, needs to be continuously interrogated. If we are to increase the range of subjectivities able to operate in the city, we must increase the precision with which social production is related to spaces which foster an active multiplicity of possible positions in relation to individuals, the socius, and the material space produced. While this cannot be understood as in terms of cause and effect, I believe it is possible to study and work with what kind of allowances are created, and the trajectories that are suggested, supported, or restricted

as a result, including the way space (mental, social, physical) is understood, appropriated, and projected.

5. Conclusion: Sustainable Societies, Modes of Subjectivity, and Architectural Ecologies of Care

One of the central points to emerge in the course of this discussion is that—despite valid arguments against Lefebvre's suggestion that abstract space is a driving force in the neoliberal economy (e.g., Keil, 2002)—I believe it is worth at least considering that abstract space is in fact a participant force in that economy, perhaps even more so today than when *The Production of Space* was written. While the underlying processes of neoliberal market economy might still be industrial, this industrial structure is increasingly reliant on modes of subjectivity that relates to self, others, and the environment as consuming-experiencing subjects. While this would arguably be the principle of the division of labor in general, it is important for the industrial economies of the global neoliberal market that the dominant disposition for large parts of the population is one where every situation is engaged with as a consumer. The answer to an increasing number of everyday challenges, questions, and situations is "consumption", and in turn this consumption is deeply rooted in modes of subjectivity. This development is visible in both professional and spare-time activities: instead of pursuing multifaceted ways of dealing with the question "what should I do now?" (ways that relate differently to self, others, and the environment, or which engage with different aspects of aisthesis, poiesis, and techné) rather, the economy depends on the range of choices available within the realm of consumption. Addressing this deficiency, I argue, depends on a thorough reconfiguration of material, architectural space that drives relations towards such modes of subjectivity. Since this operates on many levels, the specific forms it takes in different social and cultural contexts may differ, but arguably it all depends on processes of "abstraction" in the particular sense present in "abstract space".

Capitalism, neoliberalism, and consumer society currently thrives on positioning people as consumers, and positioning urban designers, planners, and developers as providers of services to be experienced: individuals here are rendered as subjects of aisthesis. Compared to the time at which *The Production of Space* was written, this tendency has arguably snowballed in large parts of the affluent world, as production of any kind is constantly pushed out of cities to the point that it is possible to introduce even food production—a common practice in most historical cities—as something novel. In this reintroduction, such production is predominantly a tool for generating a specific range of experiences, rather than a way to offer an active, creative-productive opportunity for citizens, even though there certainly are variations on this theme (e.g., Anderson & Barthel, 2016; Böhm, 2017; Petrescu, 2017). This argument does not only concern heavy industry; in distinctly creative fields such as art, culture, and "the creative economy", similar tendencies exist: artists, designers, and other actors are expected to largely exist for the purpose of providing certain atmospheres and supporting certain economies, where focus is put on the *experience and consumption* of not only the products, but the "creative environment" they are expected to provide while the actual sites of production, which in contemporary art hardly can be limited to small ateliers or "creative spaces" of the mobile hotdesk or urban café, remain absent and unplanned for.

This article first developed further the notions of subjectivity-space relations at play in a project in Stockholm, by expanding the theoretical and conceptual understanding of those relations. Second, it made use of this understanding in order to discuss the complex interrelation of subjectivities, socius, and material space, questioning and expanding on how *architectural space* needs to be understood in order to advance this discussion. Third, the article has addressed how abstract space works as a pervasive process, and specifically how it reaches ever further into architectural space. Here, I addressed aspects of Lefebvre's theories that I argue are comparatively less studied, hopefully thereby contributing to the established and productive range of work dedicated to the development of his theories that emphasize that space is socially produced. Aside from such modes of practice and production, I suggest that there are ways to engage with architectural space as discipline and profession that challenge a dominant production of spaces of aisthesis—abstract space—which serve to encourage, foster, suggest, and allow other relations to self, others, and environment that include creative-productive activity and active engagement with one's environment. Such relations, I argue, are pivotal in the task of addressing sustainability challenges, where local production and reuse form important pieces of a different environmental ecology, where the answer to "what to do" is not only restricted to "what to consume". What is at stake here is more than simply understanding the working conditions behind production and productive labor. While an important goal in itself, what is at stake is rather the modes of subjectivity that are allowed and fostered in society, and the relations to self, one another, and environment that these modes include. Whether it is within the discourse, power structures, rhythms and norms; possible, probable, and reasonable to consider what to do; or questions of how to address a problem, or how to proceed with one's daily life, we must urgently direct our attention not only towards what is made available for consumption and experience, but to what society and space enables in terms of creative-productive activity.

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Conflict of Interests

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